Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-24 (Canceled)

25. (Previously Presented) A receiver comprising:

a mixer to down convert a received RF signal; and

a local oscillator (LO) circuit coupled to said mixer, wherein said LO circuit comprises:

a first LO source to generate a first periodic signal cycling at a first frequency;

a second LO source to generate a second periodic signal cycling at a second frequency different than said first frequency;

an amplifier having an input, an output coupled to the mixer, and a gain variable with the amplitude of a signal applied to the amplifier;

a first switching element to selectively couple said first periodic signal to said amplifier input when said first switching element is turned on; and

a second switching element to selectively couple said second periodic signal to said amplifier input when said second switching element is turned on;

said first and second switching elements allowing leakage of said first and second periodic signals, respectively, to said amplifier input when said first and second switching elements are off, respectively;

the amplifier responding to a signal comprising said first periodic signal and leakage of said second periodic signal by providing a greater gain to said first periodic signal than to said leakage of said second periodic signal, and responding to a signal comprising said second periodic signal and leakage of said first periodic signal by providing a greater gain to said second periodic signal than to said leakage of said first periodic signal.

26. (Previously Presented) The receiver of claim 25 wherein the gain of said amplifier decreases with signal amplitude.

27. (Previously Presented) The receiver of claim 26 wherein the amplifier comprises a differential transistor pair having a predetermined tail current.

28. (New) The receiver of claim 27 wherein the transistor pair is a bipolar transistor pair.

29. (New) The receiver of claim 28 wherein the differential transistor pair has resistive loads thereon.

30. (New) The receiver of claim 27 further comprising a transformer having a primary winding coupled to the first and second switching elements and a secondary winding coupled to control terminals of the transistor pair.

31. (New) The receiver of claim 25 wherein the amplifier is a differential amplifier and further comprising a transformer having a primary winding coupled to the first and second switching elements and a secondary winding coupled to input terminals of the differential amplifier.

32. (New) The receiver of claim 25 wherein the receiver is a frequency hopping receiver.

33. (New) A radio comprising:

a mixer to convert the frequency of a signal; and

a local oscillator (LO) circuit coupled to said mixer, wherein said LO circuit comprises:

a first LO source to generate a first periodic signal cycling at a first frequency;

a second LO source to generate a second periodic signal cycling at a second frequency different than said first frequency;

an amplifier having an input, an output coupled to the mixer, and a gain variable with the amplitude of a signal applied to the amplifier;

a first switching element to selectively couple said first periodic signal to said amplifier input when said first switching element is turned on; and

a second switching element to selectively couple said second periodic signal to said amplifier input when said second switching element is turned on;

said first and second switching elements allowing leakage of said first and second periodic signals, respectively, to said amplifier input when said first and second switching elements are off, respectively;

the amplifier responding to a signal comprising said first periodic signal and leakage of said second periodic signal by providing a greater gain to said first periodic signal than to said leakage of said second periodic signal, and responding to a signal comprising said second periodic signal and leakage of said first periodic signal by providing a greater gain to said second periodic signal than to said leakage of said first periodic signal.

34. (New) The radio of claim 33 wherein the radio is a transmitter.

35. (New) The radio of clam 34 wherein the transmitter is a frequency hopping transmitter.

36. (New) The radio of claim 33 wherein the mixer is coupled to up convert the frequency of the signal.

37. (New) The radio of claim 33 wherein the mixer coupled to down convert the frequency of the signal.

38. (New) The radio of claim 33 wherein the gain of said amplifier decreases with signal amplitude.

39. (New) The receiver of claim 38 wherein the amplifier comprises a differential transistor pair having a predetermined tail current.

40. (New) The receiver of claim 39 wherein the transistor pair is a bipolar transistor pair.

41. (New) The receiver of claim 40 wherein the differential transistor pair has resistive loads thereon.

42. (New) The receiver of claim 39 further comprising a transformer having a primary winding coupled to the first and second switching elements and a secondary winding coupled to control terminals of the transistor pair.

43. (New) The receiver of claim 33 wherein the amplifier is a differential amplifier and further comprising a transformer having a primary winding coupled to the first and second switching elements and a secondary winding coupled to input terminals of the differential amplifier.